

SatFACTS EXTENDED

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P.O. Box 330, Mangonui 0442, Far North, New Zealand
Tel 64-9-406-0651; Fax 64-9-406-1083; Email skyking@clear.net.nz

NDS claims victory; DISH claims vindication!

AS related in SF#163 ('Law Suit Two: EchoStar v. NDS), #164 ('Rupert versus Charlie'), and Extended # 165 ('NDS Versus Dish: Open Forum'), Charlie Ergen's DISH Network joined by CA specialist Nagra/Kudelski spent more than five years fine tuning a lawsuit seeking over a billion (US) dollars in damages. DISH et al charged NDS with hacking their Nagra conditional access system and releasing a 'how-to-do-this' set of instructions on various Canadian based web sites. DISH claimed losses exceeding a billion dollars as apparently tens to hundreds of thousands helped themselves to the DISH programming using this information.

An eight person jury found NDS guilty of violating one Nagra smart card but not guilty of passing their hacking knowledge to others (through a Canadian web site or otherwise). The jury awarded EchoStar the equivalent of \$1,546 - a bit short of the \$1,000,000,000 DISH had sought. NDS immediately claimed, *"This verdict is a complete vindication of NDS's position at trial, and it puts an end to the lie that NDS is in any way responsible for piracy."*

However, the verdict as reported widely depended significantly upon who the reporter either worked for or favored. The Wall Street Journal (WSJ), normally the paragon of accuracy for such business news, initially reported 'a split decision' with both sides winning something. Their wire service story lasted only an hour to be replaced by one claiming full victory for NDS and it would be the revised version which eventually made its way around the globe into newspapers, magazines and television business newscasts. Rupert Murdoch purchased the Wall Street Journal during 2007 and his passion for micro-managing properties is well known.

The 'real' jury decision

United States District Court case no. SA CV 03-0950 DOC(JTLx) carried a title of "EchoStar Satellite Corporation, ET AL., Plaintiffs, -v- NDS

Group PLC, ET AL., Defendants". At the end of the 19 day trial, the jury hands into the court a document titled 'Verdict Form' which becomes the official record for all decisions.

'Verdict Form' states:

"Claim 1 Digital Millennium Copyright Act 17 U.S.C. 1201(a)(1)(a) Liability.

"Question no. 1: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of evidence that NDS violated the Digital Millennium Copyright Act?

" Yes ___ No X "

"Claim 2 Digital Millennium Copyright Act 17 U.S.C. 1201(a)(2) - Liability.

"Question no. 2: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of the evidence that NDS violated the Digital Millennium Copyright Act, U.S.C. 1201(a)(2)?

" Yes ___ No X "

"Claim 3 Communications Act 47 U.S.C. 605(a) - Liability

"Question No. 3: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of the evidence that NDS violated the Communication Act, 47 U.S.C. 605(a)?

" Yes X No ___ "

"If you answered YES on Question No. 3, please calculate actual damages (taking into account any reduction you may find based on any failure to mitigate damages by Plaintiffs) and statutory damages. Statutory damages are based upon the *number of violations* and *amount per violation*, which are for you to determine. Plaintiffs must elect either (a) actual damages or (b) statutory damages if you return a verdict for Plaintiffs.

" (a) Actual damages:

"EchoStar's actual damages: **\$45.69**

"NagraStar's actual damages: \$0.00

" (b) Statutory Damages:

In this issue

DISH and NDS both claim victory in court -p. 1;

"Total number of Defendants' violations against Plaintiffs: **1**

"Amount per violation (within range of \$1,000 - \$10,000): **\$1,000**

"Total Statutory Damages: **\$1,000**"

"Claim 4 California Penal Code 593d(a) - Liability

"Question No. 4: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of the evidence that NDS violated California Penal Code 593d(a)?

" Yes **X** No "

"If you answered YES on Question No. 4, please calculate actual damages (taking into account any reduction you may find based on any failure to mitigate damages by Plaintiffs) and go to Question No. 5 after calculating actual damages.

"Actual damages:

"EchoStar's actual damages: **\$45.69**

"NagraStar's actual damages: **\$0.00**

"Question No. 5: If you answered YES on Question No. 4, do you find the Defendants acted with oppression, fraud or malice?"

" Yes No **X** "

"Claim 5 California Penal Code 593e(b) - Liability

"Question No. 6: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of the evidence that NDS violated California Penal Code 593e(b)?

" Yes **X** No "

"If you answered YES on Question No. 6, please calculate actual damages (taking into account any reduction you may find based on any failure to mitigate damages by Plaintiffs) and statutory damages, and go to Question No. 7 after calculating damages. Statutory damages are based on the *number of violations* and *amount per violation*, which are for you to determine. Plaintiffs must elect either (a) actual damages or (b) statutory damages if you return a verdict for the Plaintiffs,

"(a) Actual Damages:

"EchoStar's actual damages: **\$0.00**

"NagraStar's actual damages: **\$0.00**

"(b) Statutory Damages:

"Total number of Defendant's violations against Plaintiffs: **1**

"Amount per violation (within range of \$500 - \$10,000): **\$500.00**

"Total Statutory Damages: **\$500.00**

"Question No. 7

"If you answered Yes on Question No. 6, do you find the defendants acted with oppression, fraud or malice?

" Yes No **X** "

"Question No. 8

"If you answered Yes on Question No. 6, do you find the Defendants engaged in a conspiracy to violate California Penal Code 593e(b)?

" Yes No **X** "

"Question No. 9

"If you answered Yes to Question No. 6, do you find Plaintiffs EchoStar and NagraStar have proven by clear and convincing evidence that NDS's conduct was sufficiently malicious, oppressive or in reckless disregard of Plaintiffs EchoStar's and NagraStar's rights to warrant an award of punitive damages to Plaintiffs?

" Yes No **X** "

"Claim 6 RICO 18 U.S.C. 1962(c) - Liability

"Question No. 10: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of the evidence that NDS committed Criminal Copyright Infringement in violation of 17 U.S.C. 506?

" Yes No **X** "

"Question No. 11: Have Plaintiffs EchoStar and NagraStar proven by a preponderance of the evidence that NDS committed Misconduct in Connection with an Access Device in violation of 47 U.S.C. 1029?

" Yes No **X** "

And this is a 'resting place'. For 11 questions of law, the jury found on behalf of NDS in questions 1, 2, 5, 7, 8, 9, 10 and 11; in favour of EchoStar/NagraStar on questions 3, 4 and 6. The jury 'awarded' \$1,545.69 to the Plaintiffs. NDS could claim 'victory' and 'exoneration' because of the 'score': 8 to 3, and most important the very small financial award (remember EchoStar/NagraStar had expected the jury to find 'tens of thousands' of pirated cards originating [directly or indirectly] at NDS). Each card would in effect carry its own financial reward (1,000 at the 'unusual' award of \$45.69 would have amounted to \$45,690.00).

In a 'Counterclaim' suit against EchoStar/NagraStar considered by the same jury at the same time, NDS failed to convince the court of guilt on the part of the original Plaintiffs on 2 questions.

Beyond \$1,545.69

Reports from the courtroom cadre of journalistic observers suggest EchoStar + NagraStar may have spent US\$20,000,000 on the suit; they had four attending attorneys. NDS on the other hand had 25 attorneys in attendance and estimates suggest US\$100,000,000 was expended in their defense. Oh yes - virtually overlooked by all reporters - under California and Federal Civil law, those 3 rulings in favour of EchoStar/NagraStar mean NDS must pay the court/legal costs for *both* sides. So the probable 'size' of the *real* dollar 'win' by Echo/Nagra? US\$120,001,546.69. For that kind of expenditure, they paid for the right to *claim* victory in **WSJ**.



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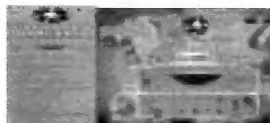
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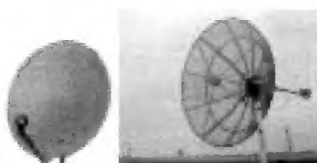
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Piracy? MCATS Abandoned by PBS

Fiji office-based PBS (Intelsat 701, 12.648H, 28.066, 3/4) is abandoning their widely cracked 'MCATS' encryption system in favour of Irdeto 2 as of 1 July. The service, a very weak competitor to Fiji TV' I701 C-Band 16 channel service, is offering a replacement Irdeto-2 CA receiver for Fiji \$199; it is assumed the viewer already has a Ku band dish and LNB. For a single unit installation (swap-out), there is no service call fee involved. PBS's MCATS system was formerly used by UBI in Australia (and continues in use on 76.6 Telstar 10 by UBI; PBS apparently has an 'association'; with UBI in Australia) but has been essentially 'open' for the last eight months. PBS offers an English package (Fiji \$34.95 per month) and a Hindi package (Fiji \$49.95 monthly) using the same 701 'Spot Beam 2' footprint of RFO (11.174) and Canal Sat Caledonie (11.610, 10.975). Live sport and full-time movies are not included in either of their packages which places PBS at a distinct disadvantage against the established regional leader Fiji Sky Pacific. Their telephone number is (00)679 337 2335.

Freeview DTT Success

Bonner Martin (bonnertmartin@entersurf.co.nz) reports very positive results with Freeview's turn on of terrestrial transmissions in his portion of North Island (Katikati). He notes, "I have been installing Zinwell STBs in poor signal areas for the last month and have been delighted with their ability to work even in areas with high multipath analogue reception problems. We work here locally from the Te Aroha transmission site when the alternate Kopurkairua signal is below threshold. With analogue UHF, the average analogue signal level from either Kopurkairua or Te Aroha is around the 46 dBuV whereas the typical digital signal is 49 dBuV. By the time the signal works through the triplexers, splitters and RG6 cable you lose on average around 15-16 dB; this means for most installations you require a masthead (amplifier).

"I have had no difficulty getting the Zinwell to work even in cases where there is high multipath (on screen severe ghosting). On Prime analogue the news reader appears as an 'army of news readers' and there can be as much as a 12 dB difference between the various (UHF) channels. The Zinwell will still work, perfectly.

"I find that where I could not in good conscience advise the customer to proceed with analogue UHF because the signal is sub-35 dBuV, a Zinwell and Matchmaster masthead still produces a perfect (digital) image. With the analogue at the same location and masthead, what you have is degrading amounts of video noise in the amplified signal. But

with digital the image remains perfect with no break-up.

"Using our motorhome with its Winegard crank-up antenna as a test vehicle, I have been amazed how far away from Te Aroha one can receive digital signals. We were in Rotorua recently and found areas where digital would work. Lake Rotoiti, where we spent the weekend, the analogue was basically unwatchable but digital still worked to image perfection. Even out beyond Opotiki at Opape the digital was still working. Prime on UHF was a black and white image with lots of snow and just barely visible. My meter indicated 25 dBuV for Prime at the TV and 28 dBuV for the digital signals. The antenna was barely 3.5 meters above ground.

"There is one fault with the Zinwell and that is on the channels we have in our area running an analogue signal through the Zinwell STB to a TV causes interference on the TV in the form of squiggly lines over the screen. I find it is best to fit a splitter before the Zinwell and feed the two separately; one output to the TV, one to the Zinwell.

"Stacking two identical (matched) UHF antennas with matched lengths of 75 ohm cable into a 'T' F-series connector with the correct spacing will net you just under 3 dB more measured signal level. In the past I have gone to stacked antennas to reduce ghosting and increase gain but with digital it is clearly a way to go when signals are marginal. In summary, 'digital runs on the sniff of an oily rag'; well done Zinwell!"

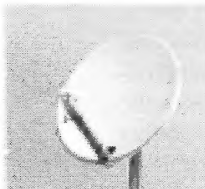
(Editor's note: 'Joining;' two [identical/matched] antennas can be a tricky exercise. An 'F' connector 'T' connector is one approach but what you are doing is placing two 75 ohm impedances in something approximately 'parallel' which results in the real impedance becoming half of the original individual antennas. An alternate approach is to use a weather proof two-way 'splitter' backwards - the two outputs become connection points from the twin identical antennas while the 'input' becomes the output to go to a masthead amp or the RG6 downline to the TV set. Typically, the best 'free space' distance between the two antennas is 3/4 to 1 wavelength at the lowest frequency to be received (start with 300 and divide into it the frequency in megahertz; example: 300 divided by 700 = 0.42 metres physical spacing between two identical antennas; 1 wavelength). In this example, the antenna # 1 to antenna #2 distance would be 420cm and the coaxial line from antenna #1 AND antenna #2 would be 1/2 of 420 cm PLUS the distance required to reach from the mast to the individual antenna's matching transformer-75 ohm F fitting.)

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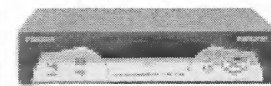


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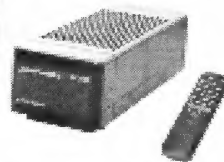
Dreamax DT470 \$90ea
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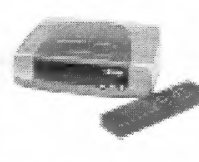
Zinwell 15K
LNB \$24/each
for box of 24



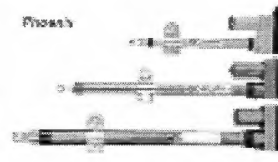
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Super Jack EZ2000
Positioner \$50/each



Star V Box II
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\$45 each how low is this

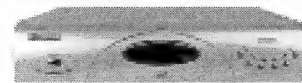


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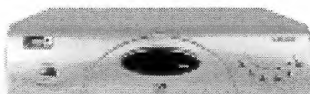
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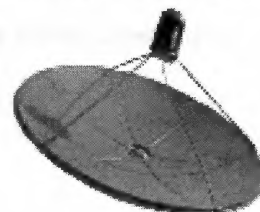


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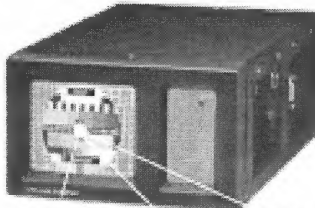
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Update on Pacific satellite operations

Scheduled launches: Chinasat 9 scheduled June 9 for 92.2E, 22 Ku (only).

AsiaSat 2/100.5E: "Catch all transponder 3960H, 27.500, 3/4, had EuroNews FTA early June." (Allen)

Optus C1/156E: "12.287V, 27.800, 3/4 Foxtel has 3HD channels; 1) 'Foxtel Sports HD', 2) 'National Geographic HD', 3) 'BBC HD'. On 12.688H, 27.800, 3/4 3 additional, 2 functioning; 1) 'ESPN HD', 2) 'Discovery HD' - 3rd is V1021, A1022 no label. All 5 have high dynamically compressed video rates but unable to tell if 720p or 1080i. CA tables both transponders contain 2 versions of NDS and 2 versions of Irdeto 2; possibly Austar will also use?" (IF, Qld)

Optus D2/152E: "FTA AFL feeds occasionally 12.300H, 6.670, 3/4 (e.g. 17 May Hawthorne v. Port Melbourne). Also FTA 12.680V, 6.670, 3/4 V8 Supercar racing feeds (10 May). Aghapy is FTA UBI 12.421H but missing on Globecast 12.706V; 'Deepam' 12.733V, 22.500, 3/4 continues FTA (Indian pay-TV channel). UBI's 'Info Channel' (12.394H, 22.500, 3/4) replaced with 'Setanta Sports' running CA. UBI now has two unused channels, both EPGs state 'Premium Channel Coming Soon'. Two changes in audio soundtracks for UBI; 12.394H, 22.500, 3/4 has eliminated radio station while 12.421H 'BHTV' now has 8 audio tracks; TV sound PID plus 7 new ones - all data rates suggest in use possibly radio? CA. (IF, Qld.)

Vinasat 1/132E: Now functioning with 2.4-3m C-band coverage of NZ, down to 1.8m on Australian East Coast; FTA so far, 3412V, 9.766, 3/4 up to six channels plus others testing. 8 C-band transponders here, 12 Ku (no Ku reports yet).

Soapbox: "The numbers tell the story; big ratings for popular shows are down in USA. The average in all American homes is now 119 TV channels available; 61% have cable TV (this is down from a high of 68% in 2000) while 27% have satellite (up from 19% in 2000). And the other 5%? Believe it or not, some Americans do without television!" (Howard S.) "UWB devices (definition: Ultra Wideband) will be allowed in NZ between 3.1 and 10.6 GHz to allow 'high speed wireless networking, high precision location of moving and stationary objects in sports, agriculture and warehousing as well as applications in multimedia entertainment'. See <http://www.rsm.govt.nz> and follow the 'ultra-wide-band-devices trail.' (Jack) "SKY NZ's defense against allowing Prime TV to be on Freeview (satellite) is under attack. They have claimed Prime 'must be encrypted to meet their no (signal) leakage requirement found in sports coverage contracts'. In fact, the D1 footprint carrying Freeview is 'so tight' that with the possible exception of five or fewer very large dishes on Norfolk Island, there is no leakage. Sky has attempted to use the

'potential leakage' argument to defend their reluctance to allow Prime to be part of the Freeview satellite packaging. An internal study at MED comes to the conclusion there is no such problem and pointedly notes 'the same D1 transponder frequencies used by Freeview and Sky are shared on a second spot beam basis into Australia eliminating even a monster dish from receiving NZ services there.'" (Arthur) "TVNZ has finally come clean with the public concerning HDTV recording. A formal announcement appearing on obscure websites and back pages of some newspapers contains the quote as follows: 'Anyone wanting HDTV needs a display device equipped with HDMI (and) it is a characteristic of this interface that no recording can be carried out, or, in other words you will not be able to record any HDTV signal (recording will be done in SD only); this is a worldwide requirement of those agencies that own the distribution rights to HDTV content.'" (David R) "Those brave enough to experiment with the Zinwell ZMT-620FTA HD STB run the risk of voiding the well stated rear of booklet warranty statement; 'This warranty is only valid for appliances used according to the manufacturer's instructions. The appliance must not be modified or changed in any way'. This suggests those attempting to download new firmware run the risk of having the unit rejected for warranty replacement if something goes awry with the download sequence. That said, there is a USB HDD upgrade which may be a step backward; after testing this, I noted AAC audio is not recorded and AC3 works on TV3 but not the others. And the upgrade 'breaks' the MHEG5 - it only shows now and next. The automatic scan no longer functions. One caution - dark blue (not light blue) is the 'currently selected option'; especially important when you are asked 'Chinese' or 'English'." (Jonathan) (Editor's note: <http://www.dtvforum.co.nz> is high recommended) "I am in this trade and have full-time access to what is happening in the analogue to digital world here in Australia. It is confusing to me, and cannot imagine how a consumer can sort through it. ABC produced programs are now in 720p while 7, 9 and 10 use 1080i for in-house programmes. SBS? When I go to their HD channel it is running at 576p and have never heard them announce a program is in HD. On the other hand, SBS on a standard definition STB glitches constantly (on and off for a second, a stall, and play again) and HD's must be set to the HD format even if it is not in HD." (IF, Qld) "India is considering where to place wireless short haul WiFi and other developing technologies; cable and satellite groups favour 2.3-2.4 +2.5-2.69 while wireless operators continue to push for 3.4-3.6 with a fallback position of space in region of 3.3 (GHz)." (Jim, Madras) "New U.S. Air Force 'Wideband Global' operating over Pacific; tested to 440 MB/s throughout speeds!" (Clyde) (Editor: X-band)

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Units of Measurements	dBm, dBmV, dBuV selectable by user
MPEG-2 Decoder	Yes, Embedded
Data-Logger	Yes, Also Captures MPEG picture to USB stick
Constellation Diagram	Yes, for QAM
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